

and wherein at least said information element a2 is provided in a manner that is resistant to or indicative of tampering by either of said sender and said recipient; and

an authenticator functioning as a non-interested third party with respect to the sender and the receiver and having

(1) means for associating said dispatch-related information with said element a1 by generating authentication-information comprising a representation of at least said elements a1, a2 and a3, said representation comprising a set of one or more elements, each comprising a representation of one or more elements of said set A; and

(2) means for securing at least part of said authentication-information against tampering of said sender and recipient;

wherein at least one of the means for associating and for securing comprises means for generating a new set B, said set B comprising one or more information elements b1, ..., bm, each element bi comprising a representation of a subset Si, said representation being expressive as a function Fi of the elements of said subset Si, where said subset Si comprises a digital representation of at least one element of said set A, and where said functions Fi can be different.

*E* 2381. (Amended) Apparatus according to claim 64 [or 67], comprising means for verifying the authenticity of an information element asserted [purported] to match a corresponding element of said set A, said verification means comprising means for comparing a representation of said [purported] information element asserted with a representation of at least part of said authentication-information to determine if they match.

*E* 24 88. (Amended) Apparatus according to claim 64 [67], comprising means for verifying the authenticity of a set Si' comprising one or more information elements which are asserted [purported] to match the corresponding elements of said subset Si, said verification means comprising:

means for generating a new information element bi' comprising a representation of

said set  $S_i'$  which is expressive as said function  $F_i$  of the elements of said set  $S_i'$ ; and means for comparing a representation of said element  $b_i'$  with a representation of said element  $b_i$  to determine if they match.

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94. (Twice Amended) A method for authenticating that certain information has been transmitted from a sender via a dispatcher to a recipient, comprising the steps of:

providing a set A comprising a plurality of information elements  $a_1, \dots, a_n$ , where said information element  $a_1$  is originated from the sender and comprising the contents of the information being electronically transmitted to said recipient, and said one or more information elements  $a_2, \dots, a_n$  comprising dispatch-related information and comprise at least the following elements:

a2 - a time indication associated with said dispatch; and

a3 - information describing the destination of said dispatch,

and wherein at least said information element a2 is provided in a manner that is resistant to or indicative of tampering by either of said sender and said recipient;

associating, by an authenticator functioning as a non-interested third party with respect to the sender and the recipient, said dispatch-related information with said element a1 by generating authentication-information comprising a representation of at least said elements a1, a2 and a3, said representation comprising a set of one or more elements, each comprising a representation of one or more elements of said set A; and

securing, by said authenticator, at least part of said authentication-information against tampering of said sender and recipient;

wherein at least one of the steps of associating and securing comprises the step of generating a new set B, said set B comprising one or more information elements  $b_1, \dots, b_m$ , each element  $b_i$  comprising a representation of a subset  $S_i$ , said representation being expressive as a function  $F_i$  of the elements of said subset  $S_i$ , where said subset  $S_i$  comprises a digital representation of at least one element of said set A, and where said functions  $F_i$  can be different.

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118. (Amended) A method according to claim 94 [or 99], comprising the step of verifying the authenticity of an information element asserted [purported] to match a corresponding element of said set A, said verification step comprising the step of comparing a representation of said [purported] information element asserted with a representation of at least part of said authentication-information to determine if they match.

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119. (Amended) A method according to claim 94 [99], comprising the step of verifying the authenticity of a set Si' comprising one or more information elements which are asserted [purported] to match the corresponding elements of said subset Si, said verification step comprising the steps of:

generating a new information element bi' comprising a representation of said set Si' which is expressive as said function Fi of the elements of said set Si'; and

comparing a representation of said element bi' with a representation of said element bi to determine if they match.

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125. (Twice Amended) A method of authenticating a dispatch and contents of the dispatch transmitted from a sender to a recipient, comprising the steps of:

receiving content data representative of the contents of the dispatch originated from the sender and being electrically transmitted to said recipient, and a destination of the dispatch;

providing an indicia relating to a time of transmission of the dispatch, said time related indicia being provided in a manner resistant to or indicative of tampering by either of the sender and the recipient;

associating, by an authenticator functioning as a non-interested third party with respect to the sender and the recipient, the content data with dispatch record data which includes at least said time related indicia and an indicia relating to the destination of the

dispatch, to generate authentication data which authenticate the dispatch and the contents of the dispatch; and

securing, by said authenticator, at least part of the authentication data against tampering of the sender and the recipient;

wherein at least one of the steps of associating and securing utilizes mathematical association methods for a selected portion of a combination of the content data and the dispatched record data.

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137. (Twice Amended) An authenticator for authenticating a dispatch and contents of the dispatch transmitted by or for a sender from a transmitting system to a receiving system for a recipient via an electronic communication network, comprising:

an input unit coupled to the communication network or to the transmitting system for receiving content data representative of the contents of the dispatch being electronically transmitted to said receiving system, and a destination of the dispatch;

means for providing an indicia relating to a time of transmission of the dispatch, said time related indicia being provided in a manner resistant to or indicative of tampering by either of the sender and the recipient;

a processor for associating the content data with dispatching record data which includes at least said time related indicia and an indicia relating to the destination of the dispatcher and the contents of the dispatch; and

means for securing at least part of the authentication data against tampering of the sender and the recipient, the authenticator functioning as a non-interested third party with respect to the sender and the recipient;

wherein the processor utilizes mathematical association methods for a selected portion of a combination of the content data and the dispatch record data to generate the authentication data.

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149. (Twice Amended) An information dispatch system in an electronic communication network comprising;  
a source transmitting system coupled to the electronic communicating network for sending a dispatch from a sender to a recipient;  
a destination receiving system coupled to the electronic communication network for receiving the dispatch for the recipient; and  
an authenticator functioning as a non-interested third party with respect to the sender and the recipient for authenticating the dispatch and contents of the dispatch transmitted from the source transmitting system to the destination receiving system, including:  
(1) an input unit coupled to the communication network or to the source transmitting system for receiving content data representative of the contents of the dispatch being electronically transmitted to said destination receiving system, and a destination of the dispatch;  
(2) means for providing an indicia relating to a time of transmission of the dispatch, said time related indicia being provided in a manner resistant to or indicative of tampering by either of the sender and the recipient;  
(3) a processor for associating the content data with dispatch record data which includes at least said time related indicia and an indicia relating to the destination of the dispatch, to generate authentication data which authenticate the dispatch and the contents of the dispatch; and  
(4) means for securing at least part of the authentication data against tampering of the sender and the recipient;  
wherein the processor is combined with the means for securing.

Please also amend claims 70, 81, 82, 84-86, 89, 91, 92, 102, 112, 113, 115-117, 120, 122, 123, 129, 130, 134, 142, 143, and 152 as follows:

Claim 70 (Amended): line 1, replace "67" with --64--.

Claim 81 (Amended): line 1, replace "67" with --64--.

Claim 82 (Amended): line 1, replace "67" with --64--.

Claim 84 (Amended): line 1, delete "67".

Claim 85 (Amended): line 1, replace "67" with --64--.

Claim 86 (Amended): line 1, replace "67" with --64--.

Claim 89 (Amended): line 1, replace "67" with --64--.

Claim 91 (Amended): line 1, replace "67" with --64--.

Claim 92 (Amended): line 1, delete "or 67".

Claim 102 (Amended): line 1, replace "99" with --94--.

Claim 112 (Amended): line 1, replace "99" with --94--.

Claim 113 (Amended): line 1, replace "99" with --94--.

Claim 115 (Amended): line 1, delete "99".

Claim 116 (Amended): line 1, replace "99" with --94--.

Claim 117 (Amended): line 1, replace "99" with --94--.

Claim 120 (Amended): line 1, replace "99" with --94--.

Claim 122 (Amended): line 1, replace "99" with --94--.

Claim 123 (Amended): line 1, delete "or 99".

Claim 129 (Amended): line 1, replace "128" with --125--.

Claim 130 (Amended): line 1, replace "128" with --125--.

Claim 134 (Amended): line 1, delete "or 128".

Claim 142 (Amended): line 1, replace "141" with --137--.

Claim 143 (Amended): line 1, replace "141" with --137--.

Claim 152 (Amended): line 2, delete "or 151".

Please cancel claims 67, 99, 128, 141, 151, and 158,161 without prejudice.

REMARKS

An Examiner Interview was conducted on August 17, 2000. During the Interview, the Examiner indicated that the previously filed Request for Reconsideration and Amendment

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